




The Future of Higher Education in California:

*Problems and Solutions for
Getting In and Getting Through*

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EXECUTIVE SUMMARY

The authors first discuss the problems that exist if California is going to meet its economic and civic demands. Too many students drop out of high school and too few go on to college. Too few transfer from community college and too many do not finish at either a community college or four-year institution. Too many are unprepared for college and not enough benefit from remedial classes once in college. Not enough are prepared for the workforce whether they graduate from high school or college.

They then put forward two types of reforms that help to resolve the issues that have been outlined.

Major System Reforms

1. Create dual pathways for students in 9th grade.
2. Create a common data system.
3. Create summer writing and math classes between 10th and 11th, and 11th and 12th grades for all students who are not scoring at grade level.
4. Have students begin college in January of their senior year.
5. Merge the California Community College and California State University Systems.
6. Guarantee a free college education for all students who graduate within 4 years from the CSU.

Modest Reforms

1. Expand linked learning.
2. Have school districts publish transparent data about dropouts, college readiness, and college-going on their websites.
3. Expand transfer agreements.
4. Create a statewide coordinating council.
5. Encourage the CSU and specific school districts to offer summer writing and math courses between 11th and 12th grade.
6. Encourage each four-year public institution to offer a summer bridge course aimed at specific outcomes.

INTRODUCTION

The value of education has rarely been disputed in the United States. Since the time of Horace Mann in the early 19th century the citizens of the United States have assumed that education enhances the economic and social prospects of the individual and improves the larger democratic public sphere. The importance of education has been so critical to the country's well-being that elementary and secondary education has been a free public good and postsecondary education has been heavily subsidized through grants to public institutions and to students.

California has been a leader amongst the states in providing education to its citizens. In 1849, Robert Semple, a delegate from Solano County to the first Constitutional Convention of California, said:

I regard education as a subject of particular importance here in California, from our location and the circumstances under which we are placed, the immense value of our lands and the extent and wealth of the country. Here, above all places in the Union, we should have, and we possess the resources to have, a well-regulated system of education. Education is the foundation of republican institutions; the school system suits the genius and the spirit of our form of government. If the people are to govern themselves, they should be qualified to do it. They must be educated; they must educate their children; they must provide means for the diffusion of knowledge and the progress of enlightened principles. (Wood, 1925)

Mrs. Olive M. Isbell opened the first school in California, in an old adobe near Santa Clara Mission in 1846. The first public school followed in 1848. The first private college opened in 1852, and the first public college began a decade later. When the state ranked 11th in population in the early 20th century, it nevertheless had the largest enrollment in public education of any state; by the 1930s 24% of California's college-age population matriculated to higher education whereas the national average was only 12% (Douglass, 2000).

In 1960 Governor Pat Brown signed into law what became known as the Master Plan for Higher Education in California. The plan broadly expanded the institutional capacity for California's citizens to attend a postsecondary institution, and guaranteed a space at low cost for anyone who wished to go to college. To be sure, from its inception the Master Plan had flaws. The wealthiest citizens sent their children largely to the University of California system; the poorest attended a community college where most neither transferred to a four-year institution nor even graduated from the two-year institution. Nevertheless, the Master Plan became a model not only in the United States but throughout the world as a public policy that highlighted the commitment of the citizens and their government to enabling everyone to attend college. The assumption behind this public policy was that attending college benefited the citizens and the state.

Table 1. Unemployment Rates by Educational Attainment

Education attained	Unemployment rate in 2012 (Percent)
Doctoral degree	2.5
Professional degree	2.1
Master's degree	3.5
Bachelor's degree	4.5
Associate's degree	6.2
Some college, no degree	7.7
High school diploma	8.3
Less than a high school diploma	12.4

Source: Bureau of Labor Statistics, Current Population Survey, 2013

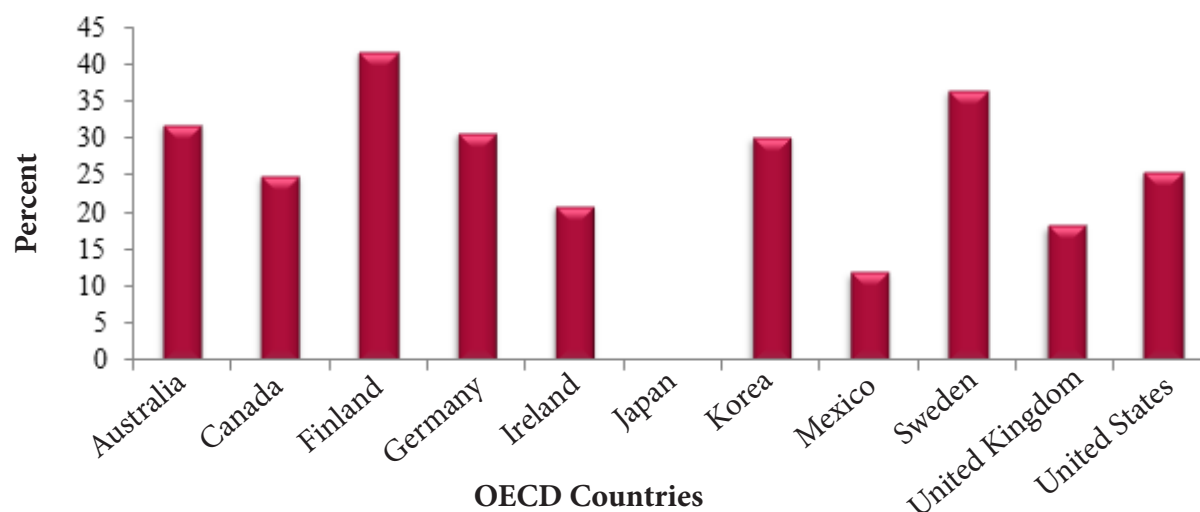
The overwhelming evidence remains that the more education one has, the greater prospects there are for better-paying jobs. During the recent recession, for example, although those with a college degree faced hardship, those with only a high school degree or less were even worse off (see Table 1). In 2012, the unemployment rate for individuals with less than a high

diploma was 12.4%; the unemployment rate for individuals with a high school diploma was 8.3%; and the unemployment rate for individuals with a bachelor's degree was 4.5% (Bureau of Labor Statistics, 2013).

Earnings over a lifetime of a college graduate are nearly double that of a high school graduate (Carnegie, Rose, & Cheah, 2011). When one looks to the future, 60% of workers will need some form of postsecondary degree—a certificate, AA, or BA degree (Lumina Foundation, 2012). Multiple reports have called for increased access to higher education. The Georgetown Center on Education and the Workforce, the Public Policy Institute of California, the Lumina Foundation, the Gates Foundation, and the Obama administration all have argued for increased college-going and graduation rates (Johnson & Sengupta, 2009; Lumina Foundation, 2012). Whereas the United States once ranked at the top of OECD rankings for college attainment, the country has fallen below many industrialized countries such as South Korea, Finland, Canada, New Zealand, and Japan (see Figure 1).

Some, but not many, have argued that the status quo is sufficient (Schalin, 2010; Vedder, Denhart, Denhart, Matgouranis, & Robe, 2010). The underpinning of the argument is that employers hire individuals with college degrees but the job only requires a high school degree. In effect, college graduates deliver pizza because there are not enough college degree-related jobs (Vedder et al., 2010). The assumption is that credentialing helps the higher education industry but not the economy. The problem of such an analysis is that 60% of the jobs in California are expected to require what one learns in college. By current estimates the state will fall short by more than one million students. Such a shortfall has dire consequences for the well-being of the state. The problem is that students are not learning the right sorts of skills in college in order to be ready for the job market upon graduation.

Figure 1. Percentage of 20- to 29-year-olds enrolled in tertiary education for 11 OECD countries in 2010



Source: Organisation for Economic Co-operation and Development (OECD), 2012

A related critique is that too many students graduate from high school and are not college-ready, and then they graduate from college and are not career-ready. The evidence seems to bear out the claims. Just under half of California State University's entering students need to take at least one remedial class. An estimated 90% of community college students enter the system under-prepared for college-level coursework (California Legislative Analyst's Office, 2013). Students also increasingly graduate from college without the requisite job skills needed.

What should be done? College degrees certainly should not be watered down to the lowest common denominator so that students are magically transformed into being ready for college. Instead, entering students should be enabled to begin their college careers without having to take remedial classes because they have taken a more rigorous curriculum in high school. Students also need to graduate ready to assume a successful career.

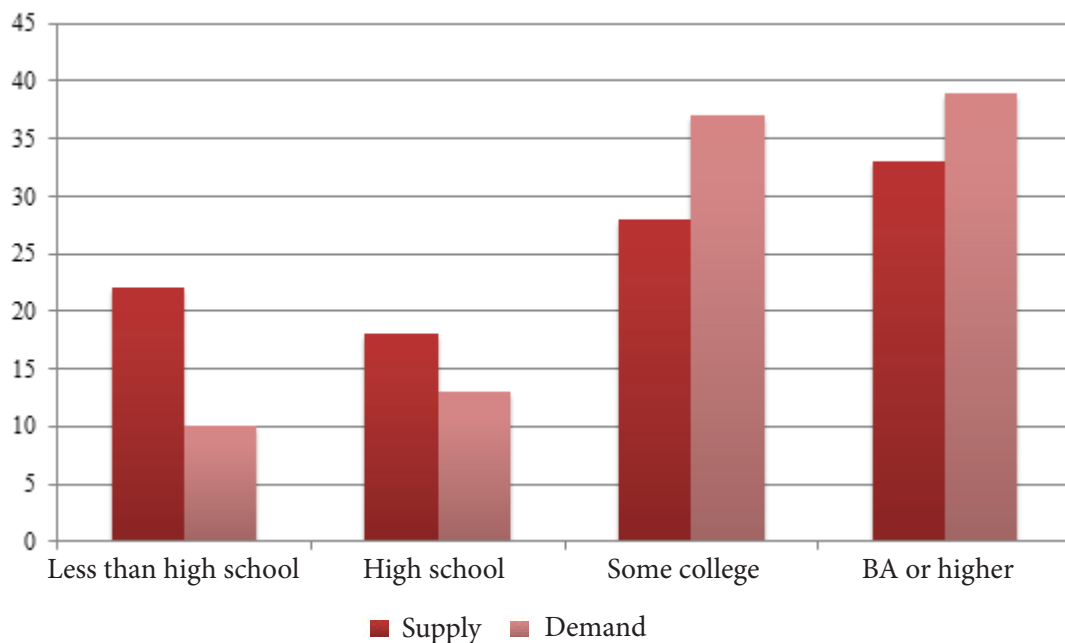
The challenges are multiple. Even as California moves out of recession and revenues increase for the public postsecondary sector, the estimates are that the state will still fall short of the person-power needed for a robust economy in 2020 (see Figure 2). Not enough students will go to college from high school. Too many students will enter academe unprepared. Too few students will transfer from a community college to a four-year institution. Too many students will take too long to graduate. And far too many students will graduate burdened with unacceptable levels of debt and unclear goals about how to prepare for and join the workforce.

All of these challenges are unacceptable. If the state simply accepts the status quo then California will be an island of mediocrity encumbered with an uneducated workforce and unacceptably low levels of revenue to support a vibrant public infrastructure. Our purpose here is neither to suggest that the challenges are amenable to quick fixes nor that they are unsolvable. We delineate the options that exist and how the state might proceed to create a strong economy that provides needed goods and services for its citizenry.

We begin with a hypothetical overview: If 100 students start in the 9th grade in California what happens to them? How many graduate and go onto college? Is the number sufficient to meet the needs of the state? Once students enter college do they graduate, dropout, or take too long to finish? Perhaps the problem is less an access issue—not enough students are going to college—but a concern about process—not enough who are in college graduate in an acceptable period of time.

Or perhaps the problem is a combination of both issues that centers on remediation—some high school students drop out and they actually could go to college, and others finish high school and attend college but do not graduate because they are academically weak or cannot find the right courses.

Figure 2. Supply and demand of California's educational workforce needs in 2020



Source: Johnson & Sengupta, 2009

We will suggest that all of these problems are a concern and the state is in need of systemic solutions. Dropouts, college access, college readiness, remediation, and course availability are all significant issues that clog the academic pipeline. The prognosis is a system in need of significant reform.

100 Students Enter Ninth Grade in California

GRADUATING FROM HIGH SCHOOL

Only about two-thirds of California's 9th graders actually graduate from high school. In Los Angeles the graduation rates are even lower; only about 59 of every 100 students will get a high school degree in four years. Twenty-four of 100 students will drop out of high school.

Not a great deal is known about leave-takers who do not complete a high school degree. What we do know is that their average earnings are considerably less than their counterparts who graduate from high school within four years. High school graduates typically earn 34% more than students who do not complete high school. Over the course of a lifetime, high school graduates on average earn \$331,000 more than students who do not complete high school (Carnevale, Rose, & Cheah, 2011).

ENTERING COLLEGE

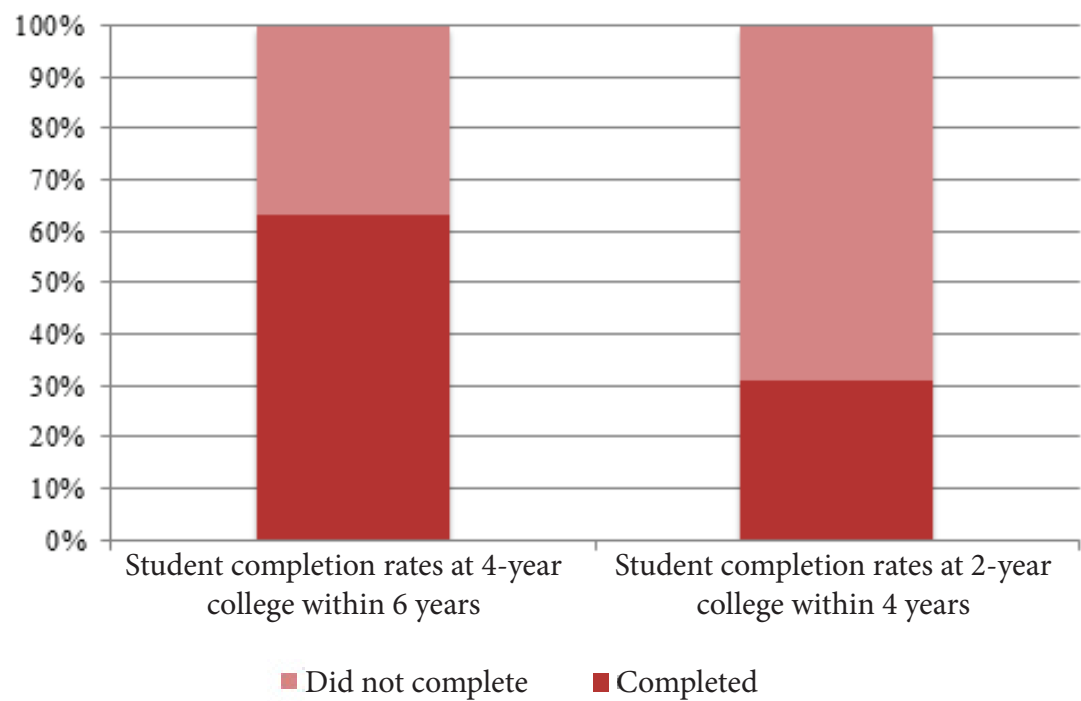
Of those original 100 students about 44 graduate from high school and go directly to college. Less than half of our 9th graders, then, go to college. About 23 of the 66 students who graduate from high school either enter the workforce or look for a job. Although high school graduates earn more than their counterparts who do not graduate with a high school degree, they will earn considerably less than those who go to college. On average, students who graduate with an associate's degree earn an estimated \$1.6 million over the course of a lifetime—\$400,000 more than a high school graduate (Community College League of California, 2013).

More students go to a community college than attend a four-year institution. Roughly 60% of the 44 students go to a two-year institution and the rest attend a four-year college or university. The likelihood of graduating with a four-year degree is more likely if a student goes directly to a college or university. Roughly 63% of students who enter a four-year institution graduate within six years (see Figure 3). Yet, only slightly more than 30% of those entering a two-year college attain a two-

year degree within four years. Of the students who enter a two-year institution, an estimated 40% actually transfer to a four-year college (Community College League of California, 2013).

What does this mean for our 100 9th graders? Eleven of them will get a bachelor’s degree (see Table 2). Eight others will get an A.A. degree. In the 21st century should California’s citizens be satisfied if slightly more than 10% of its 9th grade students will have a four-year degree in 10 years time?

Figure 3. On-time degree completion rates of students who enter college after high school in California



Sources: California Department of Education, 2011; National Center for Higher Education Management Systems, 2009

By 2025 California’s workforce will need 41% of its workers to hold a college degree to meet the demands of the economy, yet by current projections, two problems exist. First, not enough students are entering the postsecondary system to enable the state to reach its goal. Second, an inadequate number of students transfer from a two-year to a four-year institution, as well as graduating from college within six years. Approximately 84% of students graduate from the University of California system within six years, and even less—52%—graduate from the California State University system. The result is that the state is falling far short of its goals.

Table 2. Education Pipeline in California

For every 100 9th graders in CA	Number that graduate from high school	Number that enter college after high school	Number that graduate from a 2-year college with an A.A. degree	Number that graduate from a 4-year college with a B.A. degree (within 10 years)
100	68	44	8	11

Source: NCHEMS, 2009

COLLEGE READINESS AND REMEDIATION

Ninety percent of students who enter community college require at least one remedial education class (see Figure 4). Nearly half of California State University's students enter in need of remedial coursework. In the University of California, the percentage of freshmen requiring remediation varies from campus to campus. The remediation rates range from a low of 8% at UC Berkeley to a high of 64% at UC Merced. An estimated 26% of regularly admitted freshmen across the 10-campus UC system require remedial college-level writing (California Legislative Analyst's Office, 2011).

The consequences of remediation are twofold. First, students in need of remediation take longer than those who are college-ready because their remedial courses usually do not count for credit. Second, although 35% of students who take a remedial class at a four year institution eventually graduate, the likelihood is less for those who are not college-ready. An overwhelming 90% of students who take remedial classes in community college will never finish a degree (Complete College America, 2012).

Problems exist, then, all along the way for California's 9th graders. Too many drop out, too many do not go to college, too many do not arrive college-ready, too many do not graduate or transfer from a community college, and too many do not graduate from a four-year institution. If past trends continue, it is projected that California's economy will demand almost one million more college graduates in 2025 than is likely to be supplied by the postsecondary sector. To meet California's needs baccalaureate degrees need to be increased by more than 40% (Johnson & Sengupta, 2009).

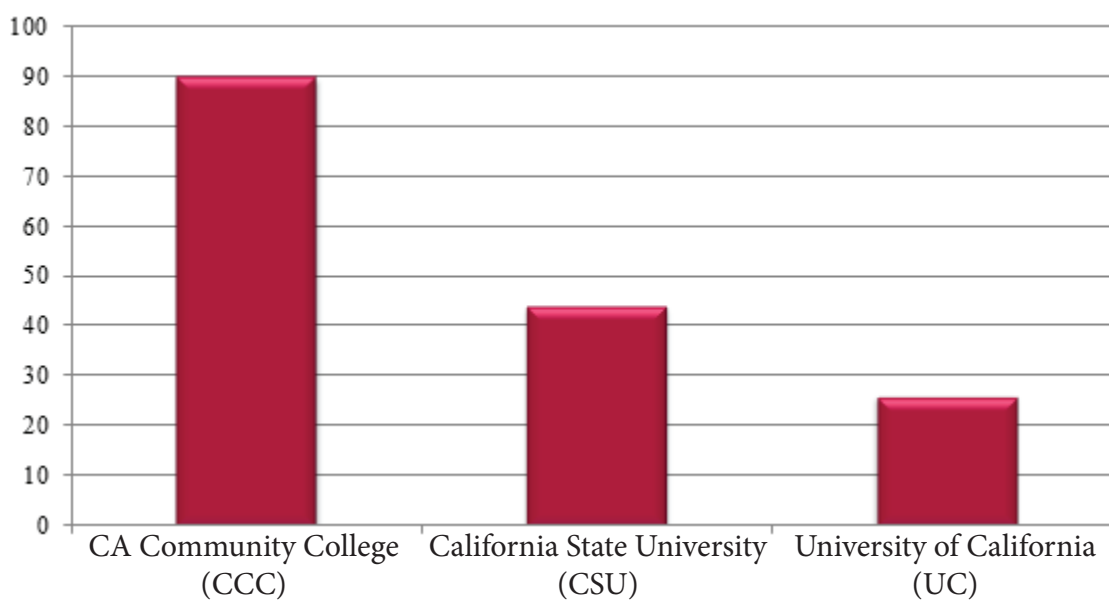
The state needs to pursue a multi-pronged strategy aimed at increasing degree production in as efficient a manner as possible. How best to proceed?

DEFINING DROPOUTS

Any discussion of dropouts benefits by understanding how to define the term: A “dropout” is a student who (a) was enrolled in school at some time during the previous school year; (b) was not enrolled at the beginning of the current school year; (c) has not graduated from high school or completed a state- or district-approved education program; and (d) does not meet any of the following exclusion-ary conditions—transfer to another public school district, private school, or state-or district-approved education program; temporary absence due to suspension or school-approved illness; or death (Stillwell, Sable, & Plotts, 2011).

The importance of understanding how to define dropouts turns on how one measures dropout rates. Examining dropout rates is not that different from investigating other sorts of data (high school graduation rates, college-going rates, etc.). Different entities use different measures to determine what constitutes a dropout because of different definitions of “dropout.” Some districts calculate how many students begin in 9th grade and graduate from a district high school. Others are able to determine if those students who “drop out” either reenter at a later date or pass the California High School Proficiency Exam. The result is an adjusted cohort graduation rate. Some define graduation rates as within a four-year time horizon and others have a longer timeframe.

Figure 4. Percentage of students who take at least one remedial class, by institution type



Sources: California Community Colleges Chancellor's Office, 2012; CSU Analytic Studies, 2013; Legislative Analyst's Office, 2011

The data presented in the tables above are derived from four entities, each of which produces different graduation and dropout figures for high school students. One logical conclusion is that the state does not do a very good job of analyzing student progress, and more importantly, ensuring that students do not drop out in part because different definitions and measures are employed.

Another conclusion that can be drawn from this data is that far too many high school students are dropping out.

The conclusions one draws from the data on dropouts are sobering. Data differ across sites due to differing analyses, interpretations, and definitions. Strategies are in place but their success is either unknown or variable due to the lack of actual support school districts have for dropout prevention and recovery. The result is that too many students leave and not enough return.

COLLEGE FOR ALL?

Implicit in our discussion is that if we are to produce more college graduates then not only post-secondary institutions need to be involved, but also K-12 education and in particular high schools. Further, one logical assumption is that if students are to be college-ready then they should receive a curriculum in high school that enables them to become college-ready. Hence, a great deal of discussion currently suggests that high schools should promote a “college for all” curriculum (Domina, Conley, & Farkas, 2011). A useful argument may be put forward about a common curriculum that promotes college-going. If more students took a cohesive college-focused curriculum, it stands to reason that more students would be better prepared for college.

A caution exists with regard to those in danger of dropping out. One of the most significant factors leading to dropping out is that these students frequently lack the requisite skills to progress through high school (Rumberger, 2011). For these students a “college for all” curriculum may be problematic. A “college for all” curriculum largely equates college with a four-year degree. Students in danger of dropping out do not necessarily need a preparatory curriculum for a Bachelor’s degree. Rather, a demanding career readiness program that links learning with real-world skills may help students in a way that a college preparatory curriculum cannot. Thus, a one-size-fits-all approach could harm those students who are most at-risk of dropping out (Rosenbaum, 2004; Symonds, Schwartz, & Ferguson, 2011).

The point here is that handling dropouts is a delicate undertaking that needs to be framed in a manner that caters to the specific needs of students with different capabilities, needs, and goals. To reduce the dropout rate ought not to suggest that every student needs to take a college for all curriculum. Just as different patients have different paths to wellness, schools need to focus on the specific needs of the student rather than assume that a common curriculum will succeed for everyone. The point is surely not to lower standards but instead to recognize the multi-faceted paths that students will need to take to assume a successful career.

COLLEGE READINESS

College readiness pertains to “the level of preparation a student needs in order to enroll and succeed without remediation, in a credit-bearing general education course” (Conley, 2008, p. 4). College readiness encompasses a range of domains—curricular content, academic behaviors, cognitive strategies, and knowledge about the context of college itself. High school GPA, high school class rank, or standardized college entrance exam scores, such as the SAT, have also been used to indicate whether a student is college-ready (Greene & Forester, 2003; Wiley, Wyatt, & Camara, 2010). In many policy contexts, college readiness is directly measured by the nature of a student’s high school transcript. The intensity of a high school curriculum is associated with greater probabilities of entering and finishing college (Adelman, 2006, Attewell & Domina, 2008). A “college-ready” high school curriculum, for example, may entail a student taking Algebra 1 through Pre-Calculus (Horn, Kojaku, & Carroll, 2001).

However, the topic of college readiness deserves attention beyond just a high school transcript, and current definitions of and policies regarding college readiness warrant scrutiny. Students fail to complete courses and their degrees for multiple reasons in addition to academic preparedness. Time management, financial literacy, engagement with other students and faculty, and other non-cognitive variables, tend to impact the ability of a student to persevere in courses and ultimately attain a degree (Britton & Tesser, 1991; Chen & Volpe, 1998; Conley, 2007, 2008; Pascarella & Terenzini, 2005).

The term “college readiness” has emerged in the educational lexicon over the past few decades as more students pursue higher education (Collins, 2009). Being “college ready” implies that high school graduates possess the skills and knowledge necessary to succeed in higher education (Conley, 2008). College readiness thus reflects a shift in thinking about American education, spurred by modern economic trends.

Policy responses to college readiness have focused on developing uniform standards and assessments across K–16 contexts (Lee, 2010). At the federal level, for example, the Common Core Standards have been adopted to better align secondary curriculum with college-level requirements (Kurlaender & Larson, 2013). Many states have started incorporating college readiness benchmarks into their K–12 assessments (Martinez & Klopott, 2005). High schools have been encouraged to foster “college-going cultures,” by offering college counseling and rigorous academic preparation (Corwin & Tierney, 2007). In higher education, reform initiatives have concentrated on decreasing remediation rates and accelerating students through remedial coursework (Collins, 2009). These various interventions reflect more comprehensive efforts to support students’ progression through K–16. Notably, non-academic facets of college readiness have not readily translated to large-scale policies that rely on standards and assessments.

COLLEGE REMEDIATION

Although there is a great deal of disagreement over the effectiveness of remediation (Attewell, Lavin, Domina, Levey, 2006; Kozeracki, 2002; Merisotis & Phipps, 2000; Soliday, 2002), everyone is in agreement that a student who is college-ready is more likely to complete college in a timely fashion than a student who requires remedial classes. Nevertheless, as noted above, a sizable number of students require remediation. Roughly 6.5 million students enter one of the nation's 1,200 community colleges annually and upwards of 60% enroll in remediation. Remedial classes are prerequisites to college-level coursework for students who have not yet demonstrated proficiency in English and/or math. These programs reflect racial/ethnic disparities, enrolling around 40% of Latinos and African Americans compared to 30% of whites. Remedial courses do not accumulate credits toward graduation. More than half of students quit. Remedial education costs states and students about \$2.3 billion annually.

Remediation has thus become a target of higher education reform. In some states, such as Connecticut and Florida, lawmakers have tried to eliminate remediation altogether. With few exceptions, incoming students in these states will now enroll directly in college-level courses. They no longer must take remedial courses. Students in Florida also do not have to take a placement test to determine their performance level. They simply may begin in courses that will earn them college credit if they pass them. Additional support services will be available to students who seek them. These reforms are designed to help students earn college credits earlier and save money, but the learning outcomes are unclear.

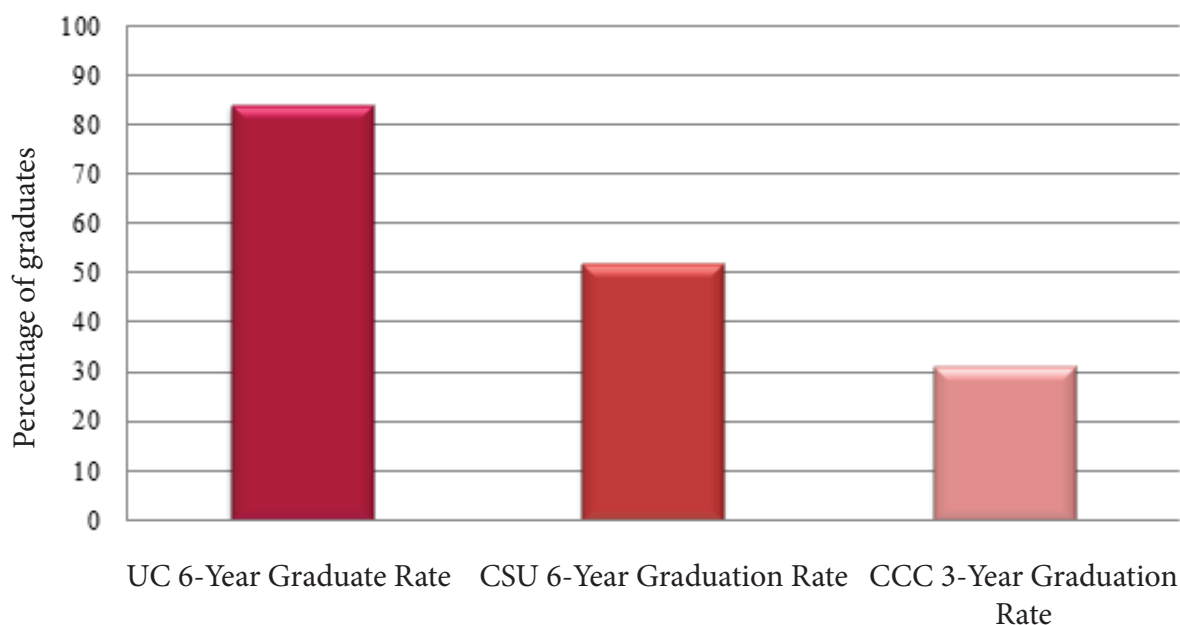
COLLEGE COMPLETION

If we return to our 100 students we note that not enough enter college, or enter college ready for the courses and environment they will find, but not enough graduate either (see Figure 5). For every 100 freshmen who enter the University of California system, roughly 60 graduate within four years, while 84 graduate within six years (University of California Office of the President, 2013). In the CSU system, for every 100 entering college freshman, 17 students graduate within four years, and 52 graduate within six years. At the community college level, for every 100 freshmen, 52 students return for their sophomore year and 31 students graduate within three years.

The problems are threefold. First, too many students cannot find the courses they need. Course offerings in community colleges plunged to their lowest level in 2011–12 in over 15 years. Relative to its high in 2007–08 and its recent low in 2011–12, the number of course sections offered to students decreased 21%, from 420,000 to 334,000 (Bohn, Reyes, & Johnson, 2013). In the CSU system, students faced similar problems as budget cuts severely reduced course offerings for students. The result is students taking longer to complete their degree because students cannot enroll in classes necessary to graduate.

Second, students' time-to-degree is neither efficient nor effective. Too many students do not take the correct courses, change degrees, or accumulate credits that do nothing for them in terms of meeting

Figure 5. Graduation Rates in California's Public Colleges



Source: California Community Colleges Chancellor's Office, 2012; CSU Analytic Studies, 2013; University of California Office of the President, 2013

the requirements to graduate. The result is that students pile up credits that have cost them and the state money. Helping new students choose and enter a program of study is one way to increase student success of students. At a community college, the earlier students enter a program of study, the more likely they are to complete a certificate, degree, or transfer (Moore & Shulock, 2011).

Third, many students intend to transfer from a community college to a four-year institution. Few do. Transfer is a failure. Only 14% of community college students transfer to four-year institutions within three years, and 27% transfer within four years (California Community Colleges Chancellor's Office, 2012). On average, about 40% of community college students transfer to four-year institutions within six years (California Community Colleges Chancellor's Office, 2012). Although modest reforms have had modest success there is virtually no data to support the idea that statewide systemic changes will occur that enable a majority of students who attend a two-year institution to transfer to a four-year college. Better counseling needs to occur with some students who enter a two-year institution so that they are aware that their chances of transferring to a four-year institution are slim. Other students need to have a better alignment of their classes in the community college with a four-year institution. And still other students should not attend a two-year institution and instead go directly to a four-year institution. System reform of transfer has been a failure for over half a century and there is little to suggest that current attempts will be any more successful than those well-intended initiatives in the past.

THE WAY FORWARD

We have outlined the problems that exist if California is going to meet the economic and civic demands that await us. Too many students drop out of high school and too few go on to college. Too few transfer from community college and too many do not finish at either a community college or four-year institution. Too many are unprepared for college and not enough benefit from remedial classes once in college. Not enough are prepared for the workforce whether they graduate from high school or college. If there is one fact to remember it is this: **Of those mythical 100 9th grade Californians, only 11 will get a bachelor's degree within a decade.** Only they are not mythical. They are our sons and daughters and neighbors.

There are two types of reforms that might be put forward to resolve the issues that we have outlined. Some recommendations, although not insignificant, will fail to change the system. These are the sorts of reforms the legislature and others (Shulock, Moore and Tan, 2014; Moore and Shulock, 2014)) have recommended. Some of these changes have had, or have the possibility to have, modest success, and we will recommend some similar steps as well.

We suspect, however, that if California were to create a Master Plan today it would not be what Governor Brown created more than a half century ago. In that light, we first offer five major reforms aimed at rethinking how the state delivers higher education.

MAJOR SYSTEMIC REFORMS

1 *Create dual pathways for students in 9th grade.*

Not every student needs to attend a four-year or even a two-year college. A “College for All” curriculum is either too watered down and does not adequately prepare students for a postsecondary career, or it increases the dropout rate for students who do not believe they need to go to college.

Even with the estimates outlined above no one says that 100% of all 9th graders should go to college. Estimates remain that at least 40% of all jobs by 2025 will only require a high school degree. What California currently has is a *laissez faire* system that assumes if anyone wants to go to college they can—but they cannot. Such a system helps no one. Other countries, such as Germany, have a much more rigorous program that links school to work beginning in high school.

We appreciate the very real problems that exist with such a recommendation. Some students, especially the poor and students of color, have historically been over-represented, or tracked, into lower paying jobs and careers because of a lack of access to educational opportunities afforded to the middle and upper classes. Through careful planning, however, discriminatory practices can be eliminated.

Further, not to focus on career planning earlier than what currently exists is disingenuous and harmful for the long-term welfare of the state and all of its citizens. Not all students want to go to college and the state does not need everyone to go to college.

2 *Create a common data system.*

Data, rightly employed, are extremely useful. Such a simple point seems obvious but we outlined the manner in which the state, school districts, and different research groups collect and track data. It is mind-numbing. From previous research we also know that the reliability of the data that get reported can be questionable. One should not need to be Sherlock Holmes to find out how many students have dropped out of a high school.

The result is that how to determine whether a student has dropped out, how to compare whether a school is successful in preparing students for college, or whether a student is even prepared for college varies from organization to organization. The monitoring system is lamentable. Individuals may employ gimmicks to tout an accomplishment when in reality all that has been done is a new configuration of the same data.

There is a great deal of disagreement in the country, in state houses, and in Congress about the desirability of common standards and data pertaining to educational outcomes for the entire country. There should be no disagreement, however, that on a state level California has the ability to collect, disseminate, and analyze common data across all sectors that pertain to college-going. The new “smarter, balanced assessment” that is being field tested in the spring of 2014 is a good first step; for it to be successful, however, everyone needs to adhere to the same interpretation and data need to be presented in a manner that heretofore has not been done.

3 *Create summer writing and math classes between 10th and 11th, and 11th and 12th grades for all students who are not scoring at grade level.*

Students begin their postsecondary careers in need of remediation because they do not have enough practice in writing and math. Although instruction in high school always can be improved, some students are always going to need additional instruction, which should come in the summer months. Time off, especially for low-income students who are unlikely to have the ability to pursue academic activities, only exacerbates their learning levels.

A concerted effort has to be made between high schools and universities to work together to offer intensive writing and math opportunities aimed at bringing students up to grade level. Again, resistance by one group or another about who teaches what, or where instruction is to be taught, has to take a backseat to the learning experiences of students. Carefully designed pre-tests and post-tests that ensure student progress is equally critical. As one person has observed, “the simple point is the more you get behind the more you get behind.”

If the state is serious about college readiness then activities and programs need to begin well before high school graduation. Simply informing a student whether he or she is writing and doing math at grade level is insufficient. Teenagers do not have the wherewithal to figure out on their own what they need to do to prepare for college. Summer programs aimed at specific goals are a significant solution.

4 *Have students begin college in January of their senior year.*

Time matters. The data outline that too many students arrive to college unprepared and take too long to graduate. Leisurely summers based on an agrarian model where students worked with their families in the fields need to be eliminated. Similarly, a final term in senior year that is spent reminiscing about high school and wondering about who to take to the prom is a missed opportunity. Indeed, it is more than a missed opportunity. These sorts of inefficient educational formations cost the state millions of dollars in lost revenue. Students who graduate sooner cost the state less revenue and generate tax dollars once they become wage earners.

Again, skeptics will ask whose responsibility it will be to educate these students. High schools will worry about lost revenue and universities will worry about the revenue needed to educate significantly more students. Such concerns are legitimate, but they ought not to forestall planning for a future if the state is serious about making significant improvements to its educational outcomes.

Consider what might be accomplished between January and August prior to freshman year with a well-defined curricula aimed at ensuring that students are prepared for college and have begun their preliminary coursework. The goals would be twofold: to ensure that everyone begins their fall year prepared for college coursework, and to enable students to have taken one or two credit-bearing preliminary classes in order to speed up the process to graduation.

5 *Merge the California Community College and California State University Systems.*

Transfer remains a problem because students have to transfer. What if they did not need to transfer? Assume that students who now attend a community college would still attend the same physical location but be admitted to the CSU. The coursework would automatically count because the student is a freshman at a CSU. At the end of two years students could receive an AA/AS degree but the assumption would be that they would continue on to their junior year. Rather than needing to opt in, they would need to opt out.

A select number of institutions would remain two-year institutions but they would not be burdened with the transfer function. Instead, they would be terminal institutions that focus on immediate career training for students. Students might receive an AA/AS degree, but most will receive certificates enabling them to get a specific job.

We appreciate the logistic issues involved with merging two sectors, but Pennsylvania stands as an example where this sort of arrangement works reasonably well. Students are admitted to Pennsylvania State University and then attend two-year branch campuses of Penn State until they transition to the main campus for their junior year. California's transfer problems can be reduced, if not eliminated if the two systems are merged. To do so, however, the state needs to concentrate on the reform of out-moded 20th century structures.

6 *Guarantee a free college education for all students who graduate within 4 years from the CSU.*

The state needs to return to its initial philosophy that a four-year education is so beneficial to the well-being of the citizenry and economy that the cost is free. The greatest opportunity for significant reform lies with the CSU because it is the sector that serves the most students who desire a four-year degree.

The greatest challenges are also there. A revamped system has to ensure that courses are available beginning in January of a student's senior year from high school. The faculty need to reduce unneeded requirements. Students need to be more focused on what they will take and when. The system needs to improve its ability to offer courses on-line.

As with the other recommendations the challenge of enacting such reforms are many. Curricular expansion rather than retraction is the hallmark of academic decision-making. Students often accumulate unneeded credits. The public postsecondary sector in most states has not embraced on-line courses. And the state has shifted the burden of paying for college to the consumer. All of these actions have harmed the state.

We no longer have the luxury of offering a smorgasbord of course offerings when at the same time students cannot find the courses they need to graduate. Students need better advice about what they need to take to complete their degree. They need to have a better sense of the real costs to themselves and to the state when they take courses that are not needed. Online courseware is only going to improve. And most importantly, the state needs a reinvigorated sense of the importance of education as a public good.

MODEST REFORMS

1 *Expand linked learning.*

California has made modest strides in enabling some students in some schools the opportunity to gain access to work venues while in school. Although the A–G curriculum has not changed and the relationship between school and employers is done on a district basis, the link between school and work at least has been established. The legislature has created funding to expand the program and some school districts are amenable to it largely because it does not disrupt the normal pattern of schooling insofar as it is additive rather than structural.

2 *Have school districts publish transparent data about dropouts, college readiness, and college-going on their websites.*

Although parents and students can find data about their specific schools it is frequently hard to locate and difficult to understand. If school districts had a common page that could talk about school success rates consumers (parents and students) would at least have some information on which to gauge the quality of their schools. The problem with such an approach is that the data will vary from district to district, report rates will vary based on when a district gets around to reporting the data, and the utility of it will be episodic.

3 *Expand transfer agreements.*

The legislature mandated automatic transfer between community colleges and the CSU. Some institutions, but not all, have taken the task seriously and there are currently relationships developed between a specific community college and a nearby CSU. Insofar as all institutions—public and private—receive state funding in some form (e.g. direct state support, through student financial aid) there is no reason that this legislation could not be expanded to include transfers to all postsecondary institutions in California. In particular, the UC needs to be incorporated into the plans.

Although one positive attribute of the legislation is that community colleges and CSU campuses need to work with one another, it is also a weakness since it is not a systemic change. Nevertheless, such a format will enable a modest increase in transfers. On a state level the governor should also recreate a statewide data office that analyzes postsecondary data.

4 *Create a statewide coordinating council.*

At the moment there is no systematic mechanism where the UC, CSU, and CCC talk with one another on a regular basis. A statewide coordinating council that also included private non-profit and for-profit institutions would at least provide for a mechanism where all postsecondary institutions were at the table to discuss common concerns and possible solutions. Although a council without authority would have limited influence, without some mechanism to discuss issues that arise communication will continue to occur on an ad-hoc basis. The more that the state can foster cross sector communication, the more likely it is that collaborative efforts will occur.

5 *Encourage the CSU and specific school districts to offer summer writing and math courses between 11th and 12th grade.*

The CSU created an early warning system for students who were deemed not ready for college-level writing or math. Although information can be helpful, what is most useful is a specific remedy to a problem. If the school districts in the state with the largest share of students who were not college-ready were encouraged to link that information with summer writing and math courses then a modest increase in college readiness would occur.

Without specific summer courses aimed at the improvement of writing and math students are not likely to score higher on college entry exams. The CSU could lower the cut scores, which they have done, making it appear that college readiness is increasing, but what is really needed are additional courses offered in the interregnum between 11th and 12th grade.

6 *Encourage each four-year public institution to offer a summer bridge course aimed at specific outcomes.*

Most UC and CSU campuses offer some version of a summer bridge program but the outcomes vary from campus to campus. Summer bridge courses can have a measurable impact but they have to have a specific goal in mind such as the improvement of writing. At present campuses offer a mish-mash of activities and courses with no clear goals in mind. Some students attend and others do not. Even with scarce monies the programs can be improved if they are asked to develop demonstrable goals that will better prepare students for freshman year.

MODEST CHANGES OR DRAMATIC REFORMS?

The information in the first part of this report leads to one of two possible conclusions. One interpretation is that we are not in crisis, the sky is not falling, and although our current condition may not be optimal, there are other priorities for the state, so only modest reforms should be attempted.

If the reader is alarmed by the state of postsecondary preparedness in California then a second interpretation is that the state should embrace an energetic reform agenda such as we have outlined here. In previous reports we have discussed the role of private non-profit and for-profit institutions in increasing the capacity for more students (Tierney & Hentschke, 2011). We also are aware that rapid changes in technology will create significant disruption to the system as we know it; but assuming that our problems will be solved by someone else is an insufficient response to problems of our making.

Our own assumption is that the state ought to respond in a manner in keeping with the historic importance that education has had in California. We conclude by repeating the words of Robert Semple in 1849:

I regard education as a subject of particular importance here in California, from our location and the circumstances under which we are placed, the immense value of our lands and the extent and wealth of the country. Here, above all places in the Union, we should have, and we possess the resources to have, a well regulated system of education. Education is the foundation of republican institutions; the school system suits the genius and the spirit of our form of government. If the people are to govern themselves, they should be qualified to do it. They must be educated; they must educate their children; they must provide means for the diffusion of knowledge and the progress of enlightened principles.

Should we not, then, move aggressively toward resolving the problems we face to ensure prosperity for the state's future?

REFERENCES

- Adelman, C. (2006). *The toolbox revisited: Paths to degree completion from high school through college*. Washington, DC: U.S. Department of Education.
- Attewell, P., & Domina, T. (2008). Raising the bar: Curricular intensity and academic performance. *Educational Evaluation and Policy Analysis*, 30, 51–71.
- Attewell, P., Heil, S., & Reisel, L. (2010). Competing explanations of undergraduate completion. *American Educational Research Journal*, 47, 1–22.
- Attewell, P., Lavin, D., Domina, T., & Levey, T. (2006). New evidence on college remediation. *The Journal of Higher Education*, 77, 886–924.
- Bohn, S., Reyes, B., & Johnson, H. (2013). *The impact of budget cuts on California's community colleges*. San Francisco, CA: Public Policy Institute of California. Retrieved from <http://www.ppic.org/main/publication.asp?i=1048>
- Britton, B. K., & Tesser, A. (1991). Effects of time management practices on college grades. *Journal of Educational Psychology*, 83, 405–410.
- Bureau of Labor Statistics. (2013, May 22). *Earnings and unemployment rates by educational attainment*. Washington, DC: U.S. Department of Labor. Retrieved from http://www.bls.gov/emp/ep_table_001.htm
- California Community Colleges Chancellor's Office. (2012). *Accountability reporting for the community colleges (ARCC)*. Sacramento, CA: Author. Retrieved from <http://extranet.cccco.edu/Divisions/TechResearchInfoSys/Research/ARCC.aspx>
- California Department of Education. (2011). *Adequate yearly progress report*. Retrieved from <http://www.cde.ca.gov/ayp/>
- California Legislative Analyst's Office. (2011). *Are entering freshmen prepared for college-level work?* Retrieved from www.lao.ca.gov/sections/higher_ed/FAQs/Higher_Education_Is-sue_02.pdf
- California Legislative Analyst's Office. (2013). *Cal facts*. Retrieved from www.lao.ca.gov/reports/2013/calfacts/calfacts_010213.pdf
- Carnevale, A. P., Rose, S. J., & Cheah, B. (2011). *The college payoff: Education, occupations, and lifetime earnings*. Retrieved from The Georgetown University Center on Education and the Workforce website: <http://www9.georgetown.edu/grad/gppi/hpi/cew/pdfs/collegepay-off-complete.pdf>

- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, 7(2), 107–128.
- Collins, M. L. (2009). *Setting up success in developmental education: How state policy can help community colleges improve student outcomes*. Retrieved from Jobs for the Future website: http://www.jff.org/sites/default/files/AtD_brief_success_082609.pdf
- Community College League of California. (2013). *Fast facts 2013*. Sacramento, CA: Retrieved from www.ccleague.org/files/public/FF2013.pdf
- Complete College America. (2012). *Remediation: Higher education's bridge to nowhere*. Washington, DC: Retrieved from <http://www.completecollege.org/docs/CCA-Remediation-final.pdf>
- Conley, D. T. (2007). *Toward a more comprehensive conception of college readiness*. Eugene, OR: Educational Policy Improvement Center.
- Conley, D. T. (2008). Rethinking college readiness. *New Directions for Higher Education*, 144, 3–13.
- Corwin, Z. B., & Tierney, W. G. (2007). *Getting there—and beyond: Building a culture of college-going in high schools*. Los Angeles, CA: University of Southern California Center for Higher Education Policy Analysis.
- CSU Analytic Studies. (2013). *Proficiency reports of students entering the CSU system*. Retrieved from <http://www.asd.calstate.edu/performance/proficiency.shtml>
- Domina, T., Conley, A., & Farkas, G. (2011). The link between educational expectations and effort in the college-for-all era. *Sociology of Education*, 84(2), 93–112.
- Douglass, J. A. (2000). *The California idea and American higher education, 1850 to the 1960 Master Plan*. Stanford, CA: Stanford University Press.
- Greene, J. P., & Forster, G. (2003). *Public high school graduation and college readiness rates in the United States*. New York: Manhattan Institute for Policy Research.
- Horn, L., Kojaku, L. K., & Carroll, C. D. (2001). *High school academic curriculum and the persistence path through college persistence and transfer behavior of undergraduates 3 years after entering 4-year institutions* (NCES 2001–163). Washington, DC: U.S. Department of Education. Retrieved from nces.ed.gov/das/epubs/pdf/2001163_es.pdf
- Johnson, H., & Sengupta, R. (2009). *Closing the gap: Meeting California's need for college graduates*. San Francisco, CA: Public Policy Institute of California. Retrieved from www.ppic.org/content/pubs/report/R_409HJR.pdf

- Johnson, N. (2012). *The institutional costs of student attrition*. Washington, DC: American Institutes for Research. Retrieved from <http://www.deltacostproject.org/sites/default/files/products/Delta-Cost-Attrition-Research-Paper.pdf>
- Kozeracki, C. (2002). ERIC review: Issues in developmental education. *Community College Review*, 29, 83–100.
- Kurlaender, M., & Larsen, M. (2013). K–12 and postsecondary alignment: Racial/ethnic differences in freshmen course-taking and performance at California’s community colleges. *Education Policy Analysis Archives*, 21(16). Retrieved from <http://www.roadmapproject.org/wp-content/uploads/2013/04/1195-3815-1-PB.pdf>
- Lee, J. (2010). Are private high schools better academically than public high schools? In K. G. Welner, P. Hinchey, A. Molnar, & D. Weitzman (Eds.), *Think tank research quality: Lessons for policy makers, the media, and the public*. Greenwich, CT: Information Age Publishing.
- Lumina Foundation. (2012). *A stronger nation through higher education*. Indianapolis, IN: Author. Retrieved from http://www.luminafoundation.org/stronger_nation/
- Martinez, M., & Klopott, S. (2005). *The link between high school reform and college access and success for low-income and minority youth*. Washington, DC: American Youth Policy Forum and Pathways to College Network.
- Merisotis, J. P., & Phipps, R. A. (2000). Remedial education in colleges and universities: What’s really going on? *The Review of Higher Education*, 24(1), 67–85.
- Moore, C., & Shulock, N. (2011). *Sense of direction: The importance of helping community college students select and enter a program of study*. Retrieved from http://www.csus.edu/ihelp/PDFs/R_Sense_of_Direction.pdf
- Moore, C. & Shulock, N (2014) *From Community College to University: Expectations for California’s New Transfer Degrees*. San Francisco, CA: Public Policy Institute of California.
- National Center for Higher Education Management Systems. (2009). NCHEMS Information Center. Retrieved from <http://www.higheredinfo.org/dbrowser/index.php?submeasure=27&year=2009&level=nation&mode=data&state=0>
- Organisation for Economic Co-operation and Development. (2012). *Education at a glance: Highlights*. Retrieved from www.oecd.org/edu/highlights.pdf
- Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students: A third decade of research*. San Francisco, CA: Jossey-Bass.

- Rosenbaum, J. E. (2004). It's time to tell the kids: If you don't do well in high school, you won't do well in college (or on the job), *American Spring Educator*, 28(1), 8–15.
- Rumberger, R. W. (2011). *Dropping out: Why students drop out of high school and what can be done about it*. Cambridge, MA: Harvard University Press.
- Schalin, J. (2010). *State investment in universities: Rethinking the impact on economic growth*. Retrieved from www.popecenter.org/acrobat/pope_articles/edreport.pdf
- Shulock, N., Moore, C. & Tan, C. (2014). *A New Vision for California Higher Education: A Model Public Agenda*. Institute for Higher Education Leadership and Policy, California State University, Sacramento.
- Soliday, M. (2002). *The politics of remediation*. Pittsburgh, PA: University of Pittsburgh Press.
- Stillwell, R., Sable, J., & Plotts, C. (2011). *Public school graduates and dropouts from the common core of data: School year 2008–09* (NCES 2011-312). Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubsearch>
- Symonds, W. C., Schwartz, R. B., & Ferguson, R. (2011). *Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century*. Cambridge, MA: Harvard University.
- Tierney, W. G., & Hentschke, G. (2011). *Making it happen: Increasing access and attainment in California higher education, the role of private postsecondary providers*. La Jolla, CA: National University System Institute for Policy Research.
- University of California Office of the President. (2013). *Annual accountability report: 2013*. Oakland, CA: Author. Retrieved from <http://accountability.universityofcalifornia.edu/report.html>
- Vedder, R., Denhart, C., Denhart, M., Matgouranis, C., & Robe, J. (2010). *From Wall Street to Wal-Mart: Why college graduates are not getting good jobs*. Retrieved from http://www.centerforcollegeaffordability.org/uploads/From_Wall_Street_to_Wal-Mart.pdf
- Wiley, A., Wyatt, J., & Camara, W. (2010). *The development of a multidimensional college readiness index* (Research Report No. 2010-3). New York, NY: The College Board.
- Wood, W. C. (1925, September). Early vision of Semple, Swett realized in broad, firm educational system. *The Bulletin Diamond Jubilee Edition*. Retrieved from <http://www.sfmuseum.net/hist3/schools.html>

ABOUT THE PULLIAS CENTER

With a generous bequest from the Pullias Family estate, the Earl and Pauline Pullias Center for Higher Education at the USC Rossier School of Education was established in 2012 (the center was previously known as the Center for Higher Education Policy Analysis). The gift allows one of the world's leading research centers on higher education to continue its tradition of focusing on research, policy, and practice to improve the field.

The mission of the Pullias Center for Higher Education is to bring a multidisciplinary perspective to complex social, political, and economic issues in higher education. Since 1996 the center has engaged in action-oriented research projects regarding successful college outreach programs, financial aid and access for low- to moderate-income students of color, use of technology to supplement college counseling services, effective postsecondary governance, emerging organizational forms such as for-profit institutions, and the retention of doctoral students of color.

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